

MINICAL SPECIFICATIONS

S (6): CD, Tuner, Aux 1, Aux 2/Phono, Tape, SSP

ITS (4): Tape, Preamplifier, Main Power Amplifier, reo Headphone Jack

ROLS (3): Input Select, Balance, Volume

HES (5): SSP, Tape/EPL (External Processor Mono/Stereo, Mute/Operate, Power On/Off

COMPLEMENT: 2-6DJ8/6922

R REQUIREMENTS: 100-120VAC 60Hz (Export 0VAC 50/60Hz) - 400VA

SIONS: 19" (48 cm) W x 5.25" (13.5 cm) H x 16" D, Knobs extend 3/4" (1.9 cm) forward of panel

EIGHT: 38 lbs, (17.2 kg) - unpacked

ATED AMPLIFIER SPECIFICATIONS

POWER: 90 Watts (25.5Vrms) into 8 ohms - ous; or 145 Watts (23Vrms) into 4 ohms; both is driven 20Hz to 20kHz @ <1% THD&N

ENCY RESPONSE: -0.5dB 20Hz to 35kHz -3.0dB 10Hz to 95kHz (@ 1W)

L TO NOISE RATIO: -95dB (A-weighted ref 80W ower); -90dB (Unweighted ref 80W rated power)

U: 0.1% 1kHz @ rated power, 30Hz to 15kHz @ rated power, Hz to 23kHz @ rated power

PHASE: Non Inverting

IMPEDANCE: 40k ohms (Line level inputs)

39dB

Sensitivity: 280mV input for rated power, 8 ohms 3 control @ maximum)

PREAMPLIFIER SPECIFICATIONS

(Line Level Inputs to Pre Outputs)

INPUT IMPEDANCE: 40k ohms (line level inputs)

OUTPUT IMPEDANCE: 150 ohms (minimum required load: 10k ohms)

FREQUENCY RESPONSE: -0.5dB 20Hz to 90kHz, -3.0dB 1Hz to 200kHz

SIGNAL TO NOISE RATIO: -90dB (Unweighted ref 1V @ Pre Out); -95dB (A-weighted ref 1V @ Pre Out)

THD&N: 0.01% 10Hz to 50kHz (Ref 1V @ Pre Out)

PHASE: Non Inverting

GAIN: 15dB (5.7x)

POWER AMPLIFIER SPECIFICATIONS

(SSP Input(s) to Main Speaker Output)

RATED POWER: 90 Watts into 8 ohms - continuous; or 145 Watts into 4 ohms; both channels driven; 20Hz to 20kHz @ <0.1% THD&N

FREQUENCY RESPONSE: -0.5dB 10Hz to 40kHz (1W); -3.0dB 15Hz to 100kHz (1W)

SIGNAL TO NOISE RATIO: -100dB (A-weighted ref 80W rated power); -90dB (Unweighted ref 80W rated power)

THD&N: 0.1% 20Hz to 20kHz @ rated power;

PHASE: Polarity Non-inverting

INPUT IMPEDANCE: 19k ohms (Power Amplifier Inputs)

DAMPING FACTOR: 100 @ 8 ohms

GAIN: 24dB (16x)

SENSITIVITY: 1.6VRMS input for rated power



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



We at Sonic Frontiers hope you will derive many years of listening pleasure with your new Anthem Integrated 2. This Operating Manual contains important information regarding the operation and care of the Integrated 2. Be sure to read this manual carefully and follow these instructions in order to keep your unit performing and sounding its best. Please contact Sonic Frontiers if you have any questions, a Customer Service Representative will be pleased to assist you.



WHAT'S IN THE BOX?

In addition to the Integrated 2, it's cover, and the ating manual you are presently reading (with associ: inserts and warranty card), there are a few more ite take inventory of before steps are taken to make th Anthem Integrated 2 operational.

These items are:

- 2 6DJ8/6922 tubes
- a glove for handling the tubes
- a detachable AC power cord
- 18 phillips screws
- a phillips screwdriver
- remote handset

After completing an inventory of these items, proc to the next steps.

4. Sonic Frontiers, Inc. shall not be responsible in any way for consequential or indirect damages or liabilities resulting from the use and operation of the product covered herein or resulting from any breach of this warranty or any implied warranty relating to said product.

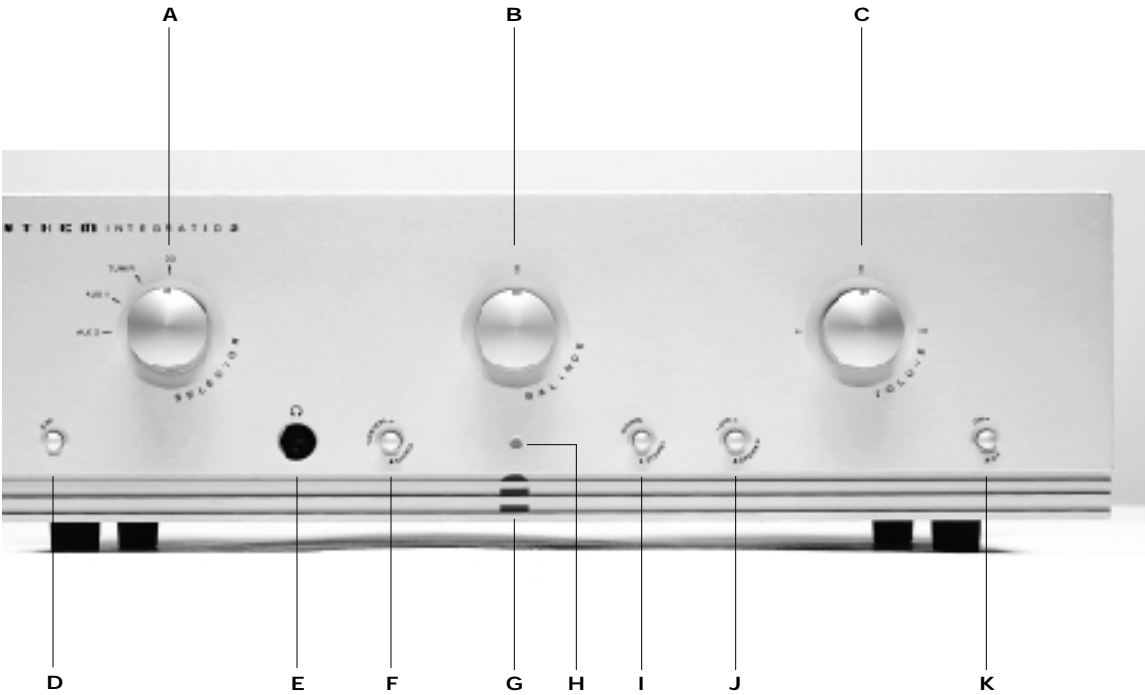
During this period, Sonic Frontiers, Inc. will repair or replace any defective components free of charge. A Return Authorization Number (RA Number) is required before any product is returned to our factory for any reason. This number must be visible on the exterior of the shipping container(s) for Sonic Frontiers to accept the return.

Units shipped to us without a Return Authorization Number or without a visible RA Number on the exterior of the shipping container(s) will be returned to the sender, freight collect.

Units to be repaired by Sonic Frontiers, Inc. must be sent shipping and insurance prepaid by the original purchaser in the original packing material. A returned product should be accompanied by a written description of the defect. Repaired units will be returned by Sonic Frontiers, Inc. shipping and insurance prepaid.

All other warranties or conditions either written or implied are void.

Note: In foreign markets (anywhere outside of Canada and the USA), the warranty is supplied by the authorized International Distributor. Exact terms and conditions may vary.



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-IN TIME
all audio electronic products, the ultimate sonic
er of the Integrated 2 will not be realized until and
he unit receives a minimum of approximately 70
f signal break-in time (i.e. the Integrated 2 is on
putting a signal).

MENT FOR PROPER VENTILATION
: least 4" (15 cm) of clear space above the
ed 2 chassis for proper ventilation, making sure the
slots in the chassis cover remain unobstructed.
» sure that the Integrated 2 is placed on a secure,
d level surface (not on carpet).

/ INSTRUCTIONS
ation - Although your Integrated 2 generates only nom-
t in use, be sure that the ventilation slots in the top
ave at least 4" of unobstructed air space above them.
r and Moisture - This product should not be used
iter. To prevent fire or shock hazard, do not expose
duct to rain or moisture.
- This product should be situated away from heat
: such as radiators, heat registers, stoves, or other
:es which produce heat.
r Sources - This product should be connected to an
rer source of the proper rated voltage. The original
g container will stipulate the AC voltage this unit can
: with correctly.
ing - A regular dusting with a soft, non-abrasive
ll generally keep the finish of the faceplate and chas-
ng like new. At no time should you allow any liquid to
: contact with the Integrated 2; it may run into the
ic circuitry and cause damage which will not be cov-
der your warranty.
ing - Do not open this product. No user serviceable
ide. Refer servicing to an authorized service technician.
Use Periods - The power cord of this product should
ugged from the outlet when left unused for an
:rd period of time.
ot remove the Integrated 2 cover while the unit is
connected to an AC power source. Cover screws
ll through the ventilation slots and cause electrical
» to the Integrated 2.

PACKING MATERIALS
Please retain all of the packing material and shipping boxes
for your Integrated 2. They are custom designed to prevent
shipping damage from occurring. Sonic Frontiers, Inc. will
accept no responsibility for any damage occurring to an
Integrated 2 that is shipped in packing material other than
the original Sonic Frontiers packing material.

DISCLAIMER OF LIABILITY
Under no circumstances does Sonic Frontiers, Inc.
assume liability or responsibility for injury or damages
sustained in the use or operation of this equipment or for
damages to any other equipment connected to it.
Sonic Frontiers, Inc. reserves the right to make design
changes or improvements without the obligation to revise
prior versions. All specifications are subject to change
without notice.

LIMITED FIVE YEAR WARRANTY
Sonic Frontiers, Inc. warrants to the purchaser that each
Integrated 2 is free of manufacturing defects for a period
of five (5) years from the date of purchase. This five (5)
year limited non-transferable warranty excludes all vacuum
tubes, which we warrant for a period of twelve (12)
months. To receive this warranty, the original purchaser
must complete and mail to Sonic Frontiers, within thirty
(30) days from the date of purchase, the enclosed
Warranty Registration Card. Sonic Frontiers, Inc. will then
validate the warranty to the original purchaser. This war-
ranty is subject to the following conditions and limitations:

1. Warranty applies only to the original purchaser.
2. This warranty is void and inapplicable if the product has
been handled other than in accordance with the instruc-
tions in this Operating Manual, abused or misused, dam-
aged by accident, neglect or in being transported, or the
defect is due to the product being tampered with, modi-
fied or repaired by anyone other than Sonic Frontiers, Inc.
or an authorized Sonic Frontiers repair depot.
3. Warranty does not cover normal maintenance.

C O N T R O L F U N C T I O N S

A SELECTOR SWITCH
This knob is rotated to select a Line Level Input (P).
The Selector Switch is bypassed when the Tape/EPL
(External Processor Loop) mode is selected by
depressing the Tape/EPL-Source button (F), or when
SSP mode is selected by depressing the SSP button (D).

B BALANCE CONTROL
This knob controls the relative balance of the left and
right channels to compensate for any discrepancies
caused by speaker placement, source imbalance, etc.
Full rotation to the left or right of the center detent will
fully attenuate the left or right channel.

C VOLUME CONTROL
This knob allows variable control over the Integrated 2's
output level. Turn it clockwise and the music gets louder!

D- SSP (SURROUND SOUND PROCESSOR) INPUT BUTTON
This button selects an external Surround Sound Processor
(SSP) input signal. When selected all preamp functions
are completely disabled. The only way to deselect SSP
mode is to press the SSP button a second time.*

E HEADPHONE INPUT JACK
The Headphone Jack accepts 1/4" stereo headphone
plugs. Upon insertion of the headphone plug, the main
amplifier outputs are disabled. All other preamp func-
tions remain operational. Removal of the headphone
plug restores the main output signal.

**F TAPE/EPL (EXTERNAL PROCESSOR LOOP)-
SOURCE BUTTON**
When this button is in the SOURCE position (button is
not depressed) the signal is routed through the
Selector Switch (A) to the Tape/EPL Output (N).
Listening and taping is done in this mode. When the
button is depressed, the source signal is taken from a
tape or processor source through the Tape/EPL Inputs
(O) bypassing the selector switch.

NOTE: Underminated (open) inputs may produce hum from the
system loudspeakers when selected.

* This input also functions as an "Amplifier Only" input.

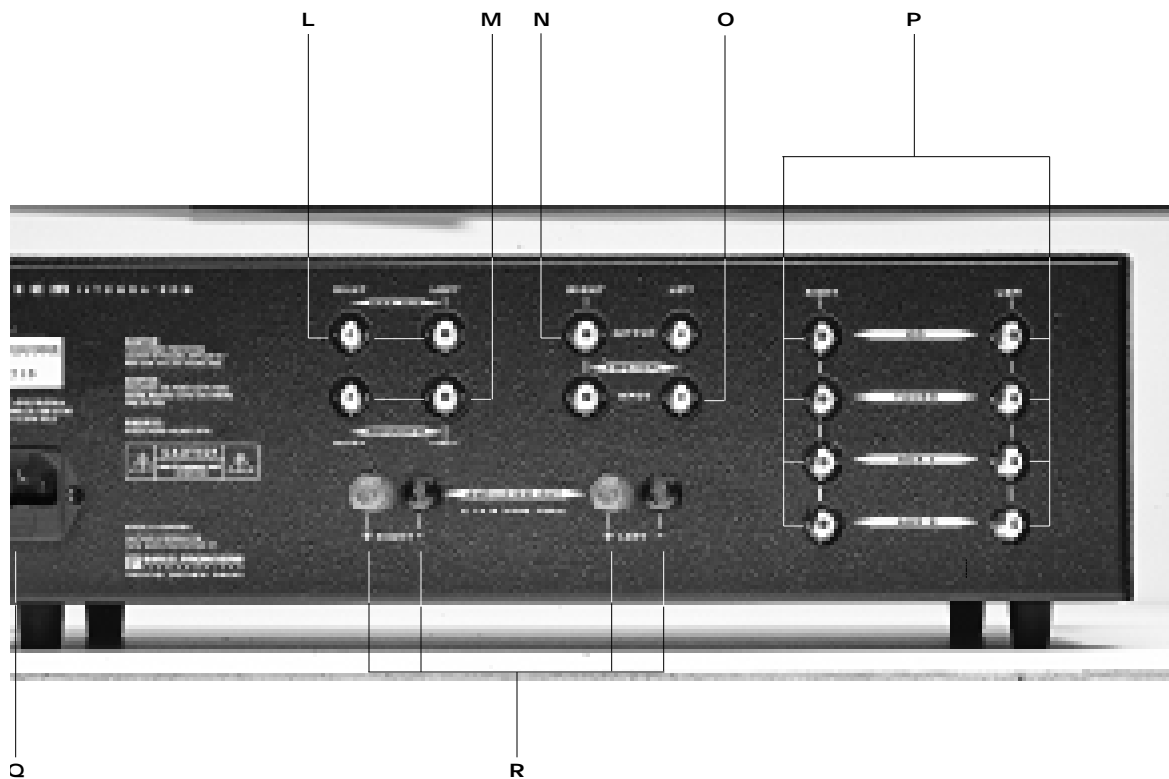
G INFRA RED RECEIVER
The Infra Red signal from the Integrated 2's rem
control is received here, to operate the Volume,
and SSP controls.

H LED
When the LED is lit the Integrated 2 is "ON", rec
power.
When the Power Button (K) is depressed the LE
be dimly lit Green. After the power-up delay has
timed-out (approx. 40 seconds) the LED will be
bright green. Upon activating the SSP button (D)
LED will be lit orange. When in Mute mode the ir
tor LED will flash ON-OFF at approximately 1 sec
intervals.

I MONO/STEREO BUTTON
When in the ON position (button depressed), the
Mono function is enabled. This function sums all
selected input signals together, and directs them
both channels. As long as the button is depress
left or a right mono signal will be sent to both ch
of the preamplifier. All other preamplifier function
operate normally.

J MUTE-OPERATE BUTTON
When in the OPERATE state, this button will allow
normal function. When in the MUTE state, the m
signal is prevented from reaching the Outputs (F
(L). To indicate a muted condition, the indicator
(H) will flash OFF-ON at approximately 1 second
vals.
**Please Note that Muting does not work w
SSP Mode.**

K ON-OFF BUTTON
When in the ON position (button depressed), lin
age is received by the Integrated 2 circuitry from
AC source. Due to the warm up characteristics i
tubes, it will take 40 seconds for the tubes to p
signal. It is suggested that the Volume be turnec
for this first minute. After the power-up time-out
(approx. 40 sec.) set the desired volume level. \
in the OFF position (not depressed), the Integra
is not receiving power and is not operational.



Volume is adjusted through use of the Volume Control (C). Turning this control clockwise increases the volume level of both channels. **Be sure the Volume Control (C) is in the fully counter-clockwise position when turning the unit ON or returning to the OPERATE mode after MUTING, to prevent damage to speakers, amplifiers or the Integrated 2.**

To record from a source, place the Tape/EPL-Source button (F) in the SOURCE position, select the source material you wish to record via the Selector Switch (A), and commence recording. To play back a tape recording, place the Tape EPL/ Source button in the TAPE position.

Muting the Integrated 2 is achieved by placing the Mute/Operate button (J) in the MUTE position (flashing green LED); the output signal is then cut off. To resume listening, place the button in the OPERATE position.

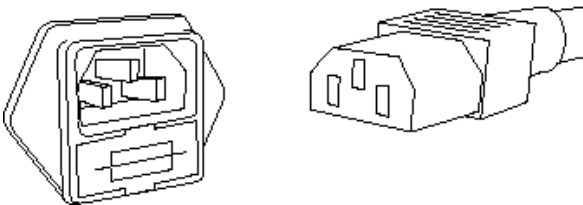


FIGURE 3
Alignment of the AC power connector and detachable cord.

It is recommended that you shut OFF the main power via the Power Switch (K) when not listening.

TROUBLESHOOTING

If at any time the Integrated 2 fails to work properly, consult this checklist:

1. Check that the AC Detachable Power Cord is plugged into the Integrated 2 Detachable Power Cord Socket (Q) and is connected to a live source of AC power. For instance, if using a power bar, check that the bar is turned on.

2. Ensure that all Input and Output connections are seen a proper electrical contact.

3. DISCONNECT THE AC POWER CORD, wait 5 minute check that:

- A slo-blo fuse, with a rating of 4 Amp/250 V (2 Amp/ for European and Asian versions), is installed in the fus er directly under the removable IEC power cord socket
- The AC power fuse is intact and has not blown. If the has blown, the thin metal conductor will have melted a glass may appear “smoked”. If the fuse has blown, rep with a fuse of the same rating (4 Amp/250V slo-blo for 120 volt countries and 2 Amp/250V slo-blo for 200 to 2 countries). (See Figure 5)

NOTE: Under no circumstances should you replace the power fuse with one of a higher current rating! Doing s cause further damage to the Integrated 2 and will also the warranty. In addition, your continued protection fro of fire or shock would be seriously compromised.

- Ensure the tubes are plugged firmly into their socket: described in “INSERTION OF THE TUBES”.

5. Be sure the rest of the system is functioning properl source unit, cables and connections, loudspeakers etc

6. With tubes, fuses, covers and power cords in place, that the LED (H) is lighted (glowing light green). If all of above troubleshooting steps have been followed and t is not lighted (remains dark green), contact your deale distributor for assistance.

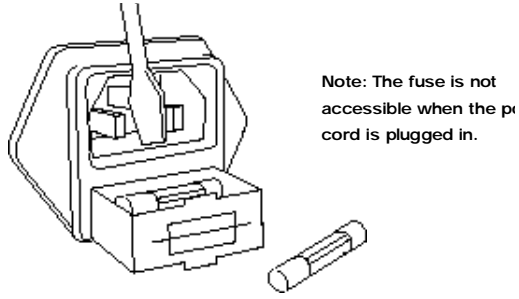


FIGURE 4
Fuse location in the Integrated 2 and removal.



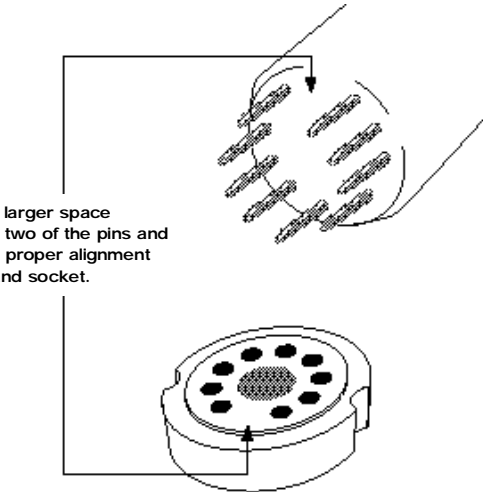
WARNING-DISCONNECT THE AC

TION OF THE TUBES

j the screwdriver supplied, remove the cover of
 :grated 2. For your convenience, only four to six
 :crews are installed at the factory.

n handling the tubes, it is recommended that the
 gloves provided be worn to prevent skin oils from
 ing on the glass surface.

g the location of the tube sockets in the top view
 inspect the tubes for corresponding labels and
 js. Once locations are mapped, take a tube and
 the pins, noting the larger space between two of
 s (see Figure 2). This space will match with the
 Insert each tube into the appropriate tube sock-
 :ing sure all pins and pin holes are aligned. Do not
 ie tubes into the sockets. "Rock" the tubes gently
 ushing slowly until each tube is firmly seated.



E 2

OPERATION

Before plugging in the Integrated 2, check to see that the
 unit is configured for the correct AC line voltage for coun-
 try of use. The operating AC line voltage is indicated on
 the side of the shipping box. If the Integrated 2 is set
 incorrectly for the country in which it is to be operated,
 contact the dealer or distributor in your area. If the unit is
 configured properly, continue with operation.

First check that the Power Switch (K) is in the "Out" posi-
 tion (OFF) and then connect the Detachable Power Cord
 to the Integrated 2 AC Power Cord Socket (Q) (see Figure
 3). Plug your Integrated 2 into the AC power source.

All remaining connections are made with your favorite
 interconnect to or from other single-ended inputs.
 Connect source units to the Integrated 2 Inputs (P); l e f t
 channel to left channel and right channel to right channel.
 If a tape or other line level recording or processing device
 is being implemented, connect the left and right audio out-
 put of the unit to the corresponding left and right Tape/
 EPL Input (O) of the Integrated 2. Also connect the left
 and right Tape/EPL Outputs (N) on the Integrated 2 to the
 corresponding left and right audio inputs of the external
 device. The outputs from a Surround Sound Processor
 (SSP) can be connected to the SSP input, left output to left
 input, right output to right input.

Connect loudspeakers to the appropriate post as
 described in the connection section of this manual.

The Integrated 2 is now ready for operation. Power the
 Integrated 2 by placing the On-Off button (K) in the ON
 position. Upon power-on, the Integrated 2 will be muted
 for 40 seconds to allow the circuitry to stabilize, and this
 will be indicated by a dim green LED (H).

Select a desired source through the Selector Switch (A).

Balance is adjusted through use of the Balance Control (B);
 turning it left and right will adjust the left and right levels.
 The center detent is an indicator for equal, or balanced, left
 and right levels.

CONNECTION FUNCTIONS

L PREAMPLIFIER OUTPUT

This output connects to the single-ended inputs of
 other units such as power amplifiers or a crossover
 unit; connect left channel to left channel and right
 channel to right channel. The "Pre-Out" jacks allow the
 Integrated 2 to be used solely as a preamp. These
 outputs are functional at all times.

M SSP/POWER AMPLIFIER INPUT

This input accepts a single-ended RCA input connec-
 tion from an external preamp or SSP Processor; con-
 nect left channel to left channel and right channel to
 right channel. The signal input at these connections
 will bypass all control functions and preamp functions
 of the Integrated 2 and will operate only as a power
 amplifier. To enable this input, depress the SSP button
 (D) on the front panel.*

N TAPE/EPL INPUT

This input accepts a single-ended RCA input connec-
 tion from a tape deck or external processor; connect
 left channel to left channel and right channel to right
 channel. These inputs are activated when the
 Tape/EPL-Source button (F) is depressed.

O TAPE/EPL (EXTERNAL PROCESSOR LOOP) OUTPUT

This output connects to the single-ended inputs of a
 tape deck or external processor; connect left channel
 to left channel and right channel to right channel. This
 output always follows the input selection of the
 Selector Switch (A).

**P LINE LEVEL INPUTS FOR CD, TUNER
 AND AUXILIARY SOURCES**

A line level single-ended source connection may be
 made to these 4 sets of RCA connectors; connect
 left channel to left channel and right channel to right
 channel.

**Q DETACHABLE AC POWER CORD SOCKET
 AND FUSE HOLDER**

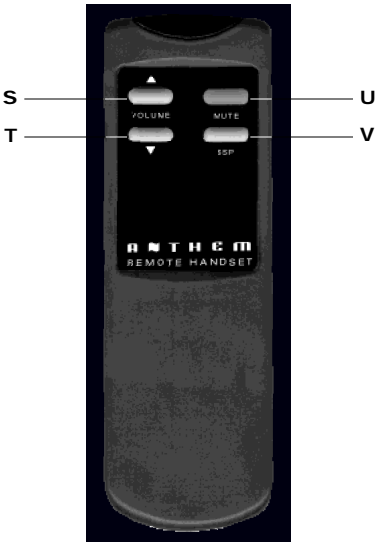
Plug the Detachable Power Cord into this socke
 Figure 3). The Integrated 2 is factory set for the
 rect operating voltage for the area in which it is
 (see shipping box for voltage setting). If a differe
 operating voltage is required, please contact an
 rized Sonic Frontiers or Anthem dealer, distribut
 the factory directly.
 Two spare fuses have been supplied with your
 Integrated 2, along with the fuse in the unit. The
 is not accessible with the detachable power cor
 place (see fig. 4). A spare fuse is supplied in the
 drawer. Use only the supplied fuses or fuses ob
 from your Sonic Frontiers dealer.

R LOUDSPEAKER CONNECTION POSTS

The binding posts on the Integrated 2 are config
 to allow bare wire (12 awg) or spade lug louds
 connections. These binding posts are CE approv
 and do not allow the use of banana plugs, as th
 nector barrel has been plugged with a plastic in:
 countries where banana plugs are allowed, thes
 inserts may be removed.
 Loudspeakers with a nominal impedance of 4 to
 ohms are suitable for use with the Integrated 2.
 have any concerns about the suitability of your l
 speakers, consult your speaker data sheet or m
 your dealer, or Sonic Frontiers Service Represen
 directly.

* In this mode, the Integrated 2 may be used as a separate pre-amp and power amp, eg. an electronic crossover may be inserted b
 "Pre-Out" and "SSP / Power-In", or the "Pre-Out" jacks could be used in a "Bi-Amp" system.

OTE CONTROL FUNCTIONS



- S VOLUME CONTROL UP**
This button will increase the volume of the Integrated 2.
- T VOLUME CONTROL DOWN**
This button will decrease the volume of the Integrated 2.
- U MUTE BUTTON**
This button will Mute the outputs of the Integrated 2 until the button is pressed again. This Muting is indicated by the flashing of the LED (H).
- V SSP BUTTON**
This button will select an external Surround Sound Processor or Preamplifier as the input, and bypass all Integrated 2 Preamp functions.

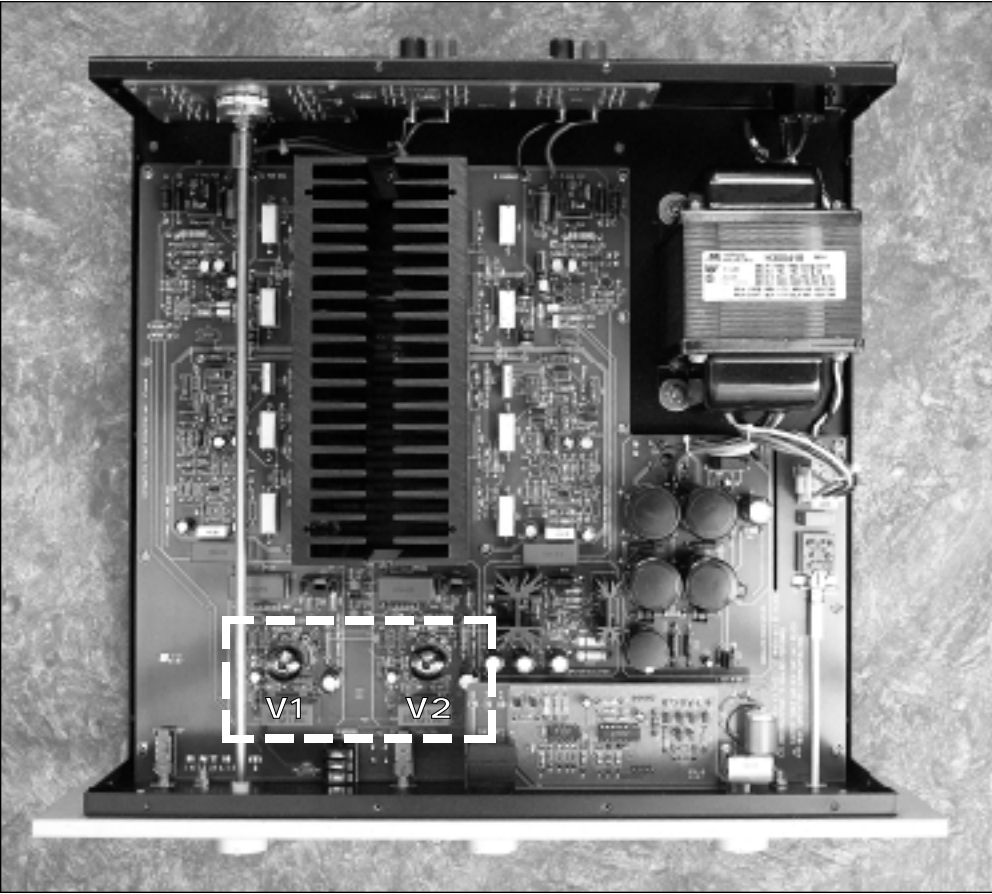


FIGURE 1

SETTING UP

The Integrated 2 comes with two (2) tubes, as follows:

6DJ8/6922 PREAMP TUBES

These tubes perform the line level preamplifying function of the Integrated 2. The preamplifier stage of the Integrated 2 provides 15 db of gain. The 6DJ8/6922 tubes may also be replaced with matched pairs of 7308 tubes. The tubes are labeled V1 & V2. Place each tube in the corresponding position according to figure 1 above.



WARNING-DISCONNECT THE AC DETACHABLE POWERCORD FROM INTEGRATED 2 AND WAIT 5 MINUTES BEFORE REMOVING COVER, OR T

A N T H E M

ANTHEM INTEGRATED 2 OPERATING MANUAL



SIGNED AND MANUFACTURED BY SONIC FRONTIERS INTERNATIONAL